

REMARKS

The Applicants request reconsideration of the rejection.

Claims 1-22 are now pending. Claims 11-16 were withdrawn pursuant to an Election of Species Requirement, but the Applicants submit that the above amendments to the claims bring all claims within the same inventive idea advanced in the elected subject matter which is, at least in part, depicted in Fig. 13. Accordingly, the Applicants request examination of all of claims 1-22.

The Applicants have provided a new title as required by the Examiner.

Claims 2 and 8 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for the reason set forth on page 2 of the Office Action. Claims 2 and 8 have been amended, without changing their scope, to address the Examiner's concern.

Claims 1-10 and 17 were rejected under 35 U.S.C. §103(a) as being unpatentable over Shank et al., US 6,145,068 (Shank) in view of Litvin et al., US 6,721,814 (Litvin). The Applicants traverse as follows.

A key feature of the invention as disclosed and currently claimed is that a prefetch is performed with load balancing. As set forth in amended claim 1, for example, an input/output (I/O) request allocation section allocates the data input/output requests that specify consecutive locations on the logical unit to the same logical path assigned by the path selection management section when data input/output requests that specify consecutive locations on the logical unit are received.

By this feature, load balancing is limited for the efficiency of prefetching because the invention does not consider whether a block to be read is suited to prefetching (that is, whether the block to be read is part of a sequential access). Instead, at least one logical path is assigned to a block by the path selection management section, and data input/output requests are allocated to the same logical path assigned to the block in case of sequential access. Therefore, both load balancing and prefetching go together.

The Applicants acknowledge that prefetching (read-ahead caching) is generally known to the art, as represented by the passage in col. 2, lines 9-36 of Litvin (cited by the Examiner). Such read-ahead caching, however, simply prefetches additional information that was not requested by the program. According to the claimed invention, the prefetching pertains to sequential requests made by the program, and thus is distinguishable from Litvin, whether taken individually or in combination with Shank. In particular, the load balancing and prefetching made consistent according to the claimed invention are not suggested by Litvin or the combination of Shank and Litvin.

Newly added claims 18-22 are dependent, respectively, from each of the independent claims 1, 6, 11, 15 and 17. Each of these dependent claims requires an input/output processing unit to transmit an input/output request to the same path used to transmit the previous input/output request when the input/output request is sequential to the previous request. These claims further require an input/output processing unit to transmit the input/output request through a path assigned to the

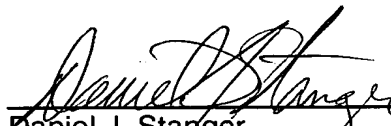
block when the input/output request is a random access request. Thus, these dependent claims more particularly point out and distinctly claim the different method of path selection for sequential and random access requests.

In view of the foregoing amendments and remarks, the Applicants request reconsideration of the rejection and allowance of the claims.

To the extent necessary, Applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of Mattingly, Stanger, Malur & Brundidge, P.C., Deposit Account No. 50-1417 (referencing attorney docket no. 1213.43667X00).

Respectfully submitted,

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